

January 6, 2020

Obstruction Evaluation Group Federal Aviation Administration

NextEra Energy Resources certifies that the proposed ADLS for this project will be continuously monitored in accordance with the current version of FAA Advisory Circular 70/7460-1 "Obstruction Marking and Lighting" as well as the Technical Note issued for the system. We will insure that this responsibility is specifically transferred to any subsequent owners of the project

Crowned Ridge Wind, LLC

John Di Donato Vice President







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01/06/2020

**ADLS Certification Vendor Statement** 

Steve Phillips
Obstruction Evaluation Group

DeTect has performed radar coverage modeling for the Crowned Ridge I Wind Farm and has determined the proposed installation of the ADLS for the project will meet the requirements of the current version of AC 70/7460-1L Obstruction Marking and Lighting, and will be in accordance with the most recent Technical Note issued for the applicable system. DeTect has modeled two radar locations for the Crowned Ridge I site. These locations provide adequate airspace coverage to activate lights and viewshed maps are provided as part of the submission. Please reach out to DeTect, Inc. if you have any questions about the documents that were submitted.

Sincerely,

DeTect, Inc.

Jesse Lewis

General Manager, DeTect Americas

Jesse.lewis@detect-inc.com

850.763.7200





2817, Highway 77 Panama City, Florida 32405 USA Tel 850.763.7200 2550 5<sup>th</sup> Ave. Suite 510 San Diego, CA USA 92103 Tel 619.795.3714 Afon House, Worthing Rd, Horsham, West Sussex RH12 1TL UK Tel 44 (0) 1403.788.315 Web www.detect-inc.com www.dronewatcher.com

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## Crowned Ridge I FAA Submission information:

Both radar sensors are the following: X Band Radar (9.2 - 9.5 GHz). Peak Power 188 Watts
PRR/PRI/or PRF 1020/2041Hz depending on pulselength.
PW 100ns 8uS and 40 or 66uS) 18.8w or 14.1w depending on pulselength.
Ave Power in watts or DBM Not above 28.2W Worst Case
Antenna Gain LPA-A25 32dBi
Antenna pointing azimuth 360 degrees rotating

## West Radar:

Latitude: 45.07776 Longitude: -97.00141

Site Elevation (AMSL - feet): 2,005

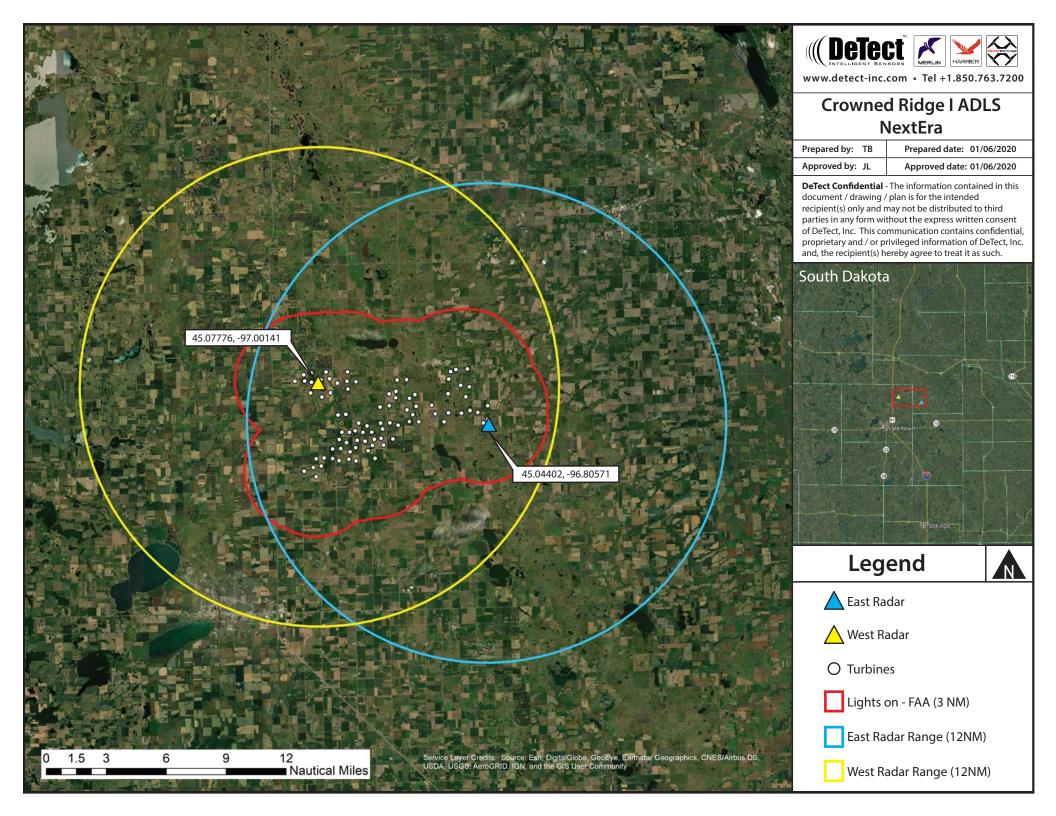
Total Structure Height (To the top of the antenna, AMSL - feet): 2,053

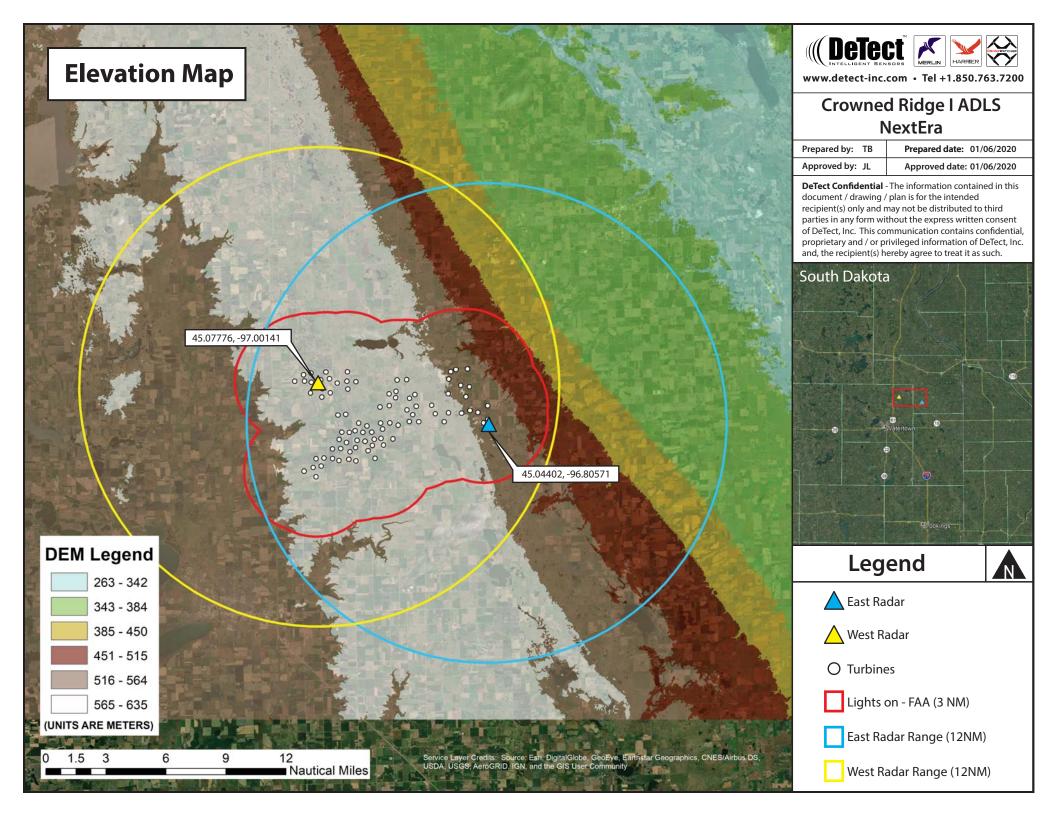
## East Radar:

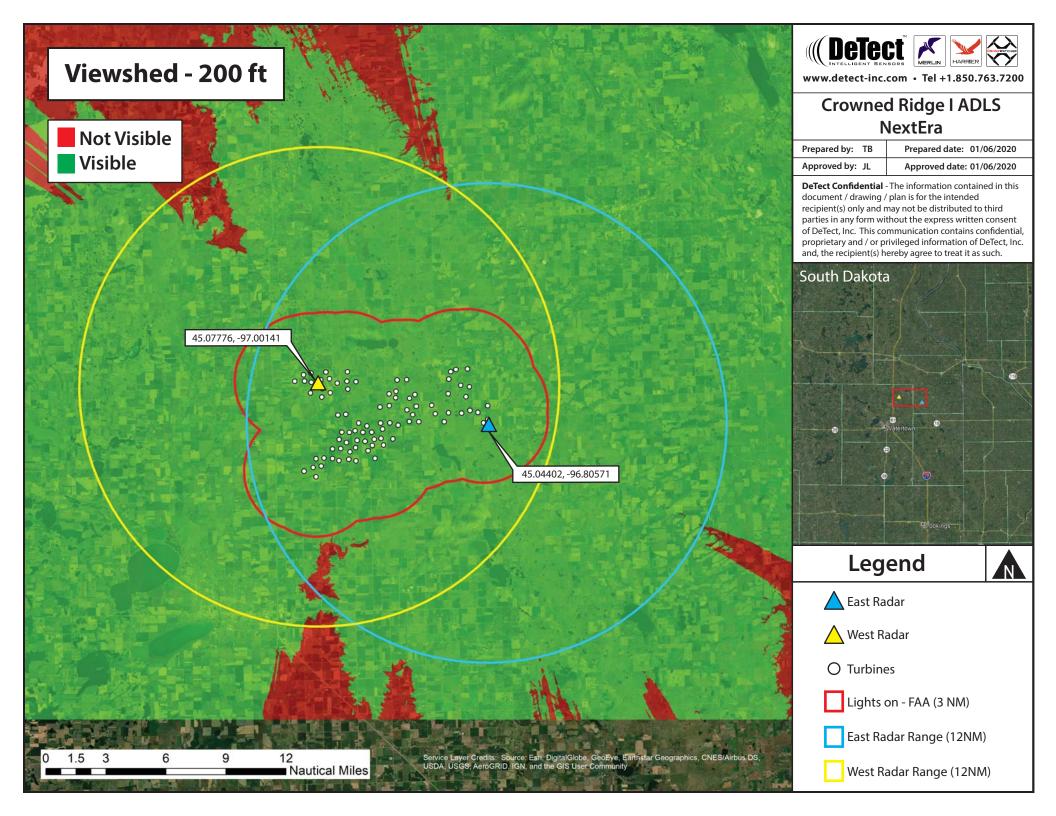
Latitude: 45.04402 Longitude: -96.80571

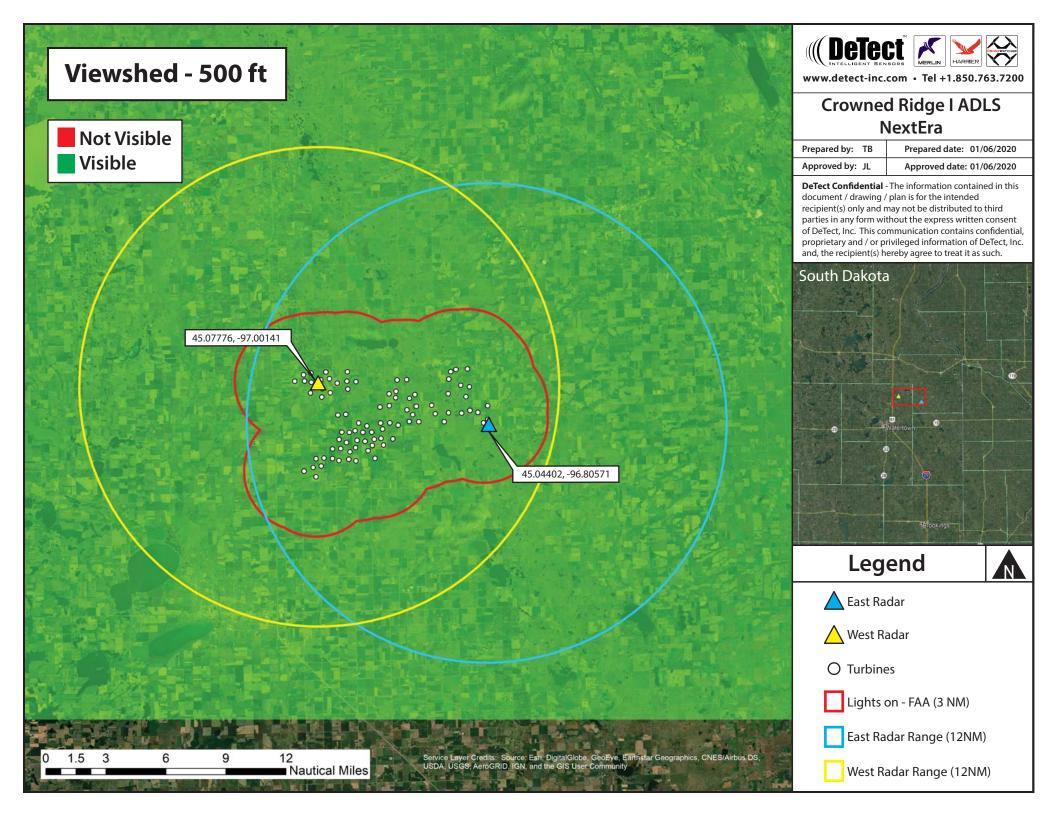
Site Elevation (AMSL - feet): 1,806

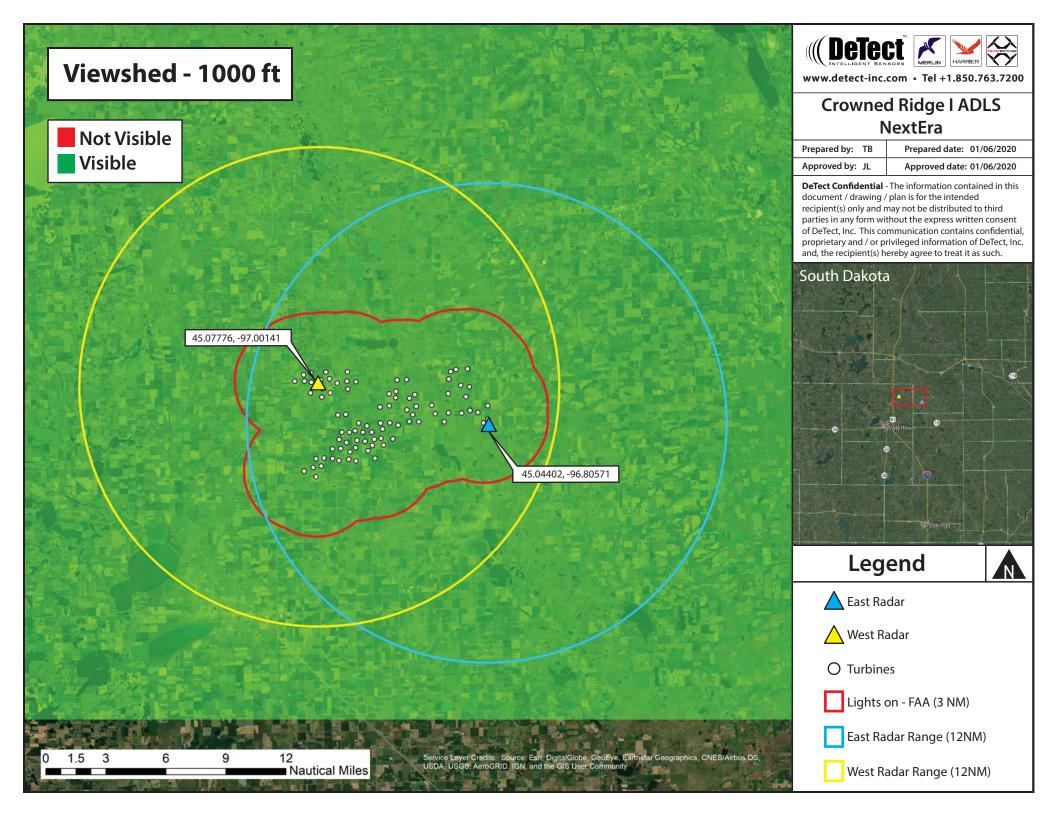
Total Structure Height (To the top of the antenna, AMSL - feet): 1,884











Structure Name*	Structure Type*	Prior ASN	Latitude*	Longitude*	(	Site Elevation		Structure (AGL I	_		Marking and Lighting*
	5.1. assume 1, pe		(NAD83, DMS Format)	(NAD83, DMS Format)	Client Provided*	USGS	For Filing*	Current	Proposed*	Current	Proposed*
CRI-24	Lighting Study for Wind Turbine	2018-WTE-12109-OE	45-5-17.38N	97-1-10.29W	1999	1998	Client Provided		499		White Paint/Synchronized Red Lights
CRI-22	Lighting Study for Wind Turbine	2018-WTE-12107-OE	45-5-21.50N	97-0-38.54W	2025	2023	Client Provided		499		White Paint/Synchronized Red Lights
CRI-21	Lighting Study for Wind Turbine	2018-WTE-12106-OE	45-5-23.63N	96-59-35.25W	2025	2025	Client Provided		499		White Paint/Synchronized Red Lights
CRI-20	Lighting Study for Wind Turbine	2018-WTE-12105-OE	45-5-22.92N	96-58-3.99W	1950	1951	Client Provided		499		White Paint/Synchronized Red Lights
CRI-31	Lighting Study for Wind Turbine	2018-WTE-12116-OE	45-4-58.57N	97-1-48.54W	1983	1982	Client Provided		499		White Paint/Synchronized Red Lights
CRI-29	Lighting Study for Wind Turbine	2018-WTE-12114-OE	45-4-58.42N	97-1-6.94W	1991	1990	Client Provided		499		White Paint/Synchronized Red Lights
CRI-33	Lighting Study for Wind Turbine	2018-WTE-12118-OE	45-4-53.78N	97-0-38.45W	2034	2032	Client Provided		499		White Paint/Synchronized Red Lights
CRI-27	Lighting Study for Wind Turbine	2018-WTE-12112-OE	45-5-1.05N	96-59-58.13W	2037	2038	Client Provided		499		White Paint/Synchronized Red Lights
CRI-25	Lighting Study for Wind Turbine	2018-WTE-12110-OE	45-5-3.61N	96-59-21.03W	1983	1984	Client Provided		499		White Paint/Synchronized Red Lights
CRI-34	Lighting Study for Wind Turbine	2018-WTE-12119-OE	45-4-49.10N	96-58-48.84W	1964	1967	Client Provided		499		White Paint/Synchronized Red Lights
CRI-30	Lighting Study for Wind Turbine	2018-WTE-12115-OE	45-4-54.70N	96-58-7.24W	1939	1947	Client Provided		499		White Paint/Synchronized Red Lights
CRI-32	Lighting Study for Wind Turbine	2018-WTE-12117-OE	45-4-52.29N	96-57-29.24W	1976	1989	Client Provided		499		White Paint/Synchronized Red Lights
CRI-28	Lighting Study for Wind Turbine	2018-WTE-12113-OE	45-4-54.67N	96-54-34.73W	1894	1896	Client Provided		499		White Paint/Synchronized Red Lights
CRI-26	Lighting Study for Wind Turbine	2018-WTE-12111-OE	45-4-54.62N	96-53-54.10W	1895	1897	Client Provided		499		White Paint/Synchronized Red Lights
CRI-39	Lighting Study for Wind Turbine	2018-WTE-12124-OE	45-4-21.99N	97-0-42.25W	2004	2003	Client Provided		499		White Paint/Synchronized Red Lights
CRI-45	Lighting Study for Wind Turbine	2018-WTE-12130-OE	45-4-8.79N	96-59-54.86W	1967	1966	Client Provided		499		White Paint/Synchronized Red Lights
CRI-35	Lighting Study for Wind Turbine	2018-WTE-12120-OE	45-4-33.72N	96-59-51.78W	1994	1992	Client Provided		499		White Paint/Synchronized Red Lights
CRI-38	Lighting Study for Wind Turbine	2018-WTE-12123-OE	45-4-21.27N	96-59-18.52W	1963	1968	Client Provided		499		White Paint/Synchronized Red Lights
CRI-36	Lighting Study for Wind Turbine	2018-WTE-12121-OE	45-4-30.90N	96-58-3.75W	1947	1955	Client Provided		499		White Paint/Synchronized Red Lights
CRI-41	Lighting Study for Wind Turbine	2018-WTE-12126-OE	45-4-13.64N	96-55-9.85W	1953	1963	Client Provided		499		White Paint/Synchronized Red Lights
CRI-37	Lighting Study for Wind Turbine	2019-WTE-5071-OE	45-4-20.48N	96-54-40.47W	1922	1927	Client Provided		499		White Paint/Synchronized Red Lights
CRI-46	Lighting Study for Wind Turbine	2019-WTE-5073-OE	45-4-0.90N	96-54-42.57W	1932	1939	Client Provided		499		White Paint/Synchronized Red Lights
CRI-44	Lighting Study for Wind Turbine	2019-WTE-5072-OE	45-3-58.40N	96-53-44.23W	1888	1890	Client Provided		499		White Paint/Synchronized Red Lights
CRI-43	Lighting Study for Wind Turbine	2018-WTE-12128-OE	45-4-9.39N	96-53-20.21W	1893	1895	Client Provided		499		White Paint/Synchronized Red Lights
CRI-50	Lighting Study for Wind Turbine	2019-WTE-7673-OE	45-3-34.56N	96-55-50.22W	2013	2011	Client Provided		499		White Paint/Synchronized Red Lights
CRI-48	Lighting Study for Wind Turbine	2018-WTE-12133-OE	45-3-37.98N	96-55-10.58W	1930	1928	Client Provided		499		White Paint/Synchronized Red Lights
CRI-52	Lighting Study for Wind Turbine	2019-WTE-5075-OE	45-3-24.18N	96-53-55.76W	1889	1887	Client Provided		499		White Paint/Synchronized Red Lights
CRI-54	Lighting Study for Wind Turbine	2018-WTE-12139-OE	45-3-9.03N	96-53-31.70W	1885	1882	Client Provided		499		White Paint/Synchronized Red Lights
CRI-51	Lighting Study for Wind Turbine	2018-WTE-12136-OE	45-3-33.98N	96-53-16.14W	1888	1883	Client Provided		499		White Paint/Synchronized Red Lights
CRI-55	Lighting Study for Wind Turbine	2018-WTE-12140-OE	45-3-13.27N	96-58-48.60W	1959	1958	Client Provided		499		White Paint/Synchronized Red Lights
CRI-53	Lighting Study for Wind Turbine	2018-WTE-12138-OE	45-3-15.36N	96-58-16.30W	1969	1967	Client Provided		499		White Paint/Synchronized Red Lights
CRI-62	Lighting Study for Wind Turbine	2018-WTE-12147-OE	45-2-48.11N	96-57-22.22W	1973	1972	Client Provided		499		White Paint/Synchronized Red Lights
CRI-65	Lighting Study for Wind Turbine	2018-WTE-12150-OE	45-2-38.66N	96-56-46.99W	1997	1997	Client Provided		499		White Paint/Synchronized Red Lights
CRI-61	Lighting Study for Wind Turbine	2018-WTE-12146-OE	45-2-46.70N	96-55-49.56W	2010	2009	Client Provided		499		White Paint/Synchronized Red Lights
CRI-64	Lighting Study for Wind Turbine	2018-WTE-12149-OE	45-2-46.32N	96-55-9.54W	1984	1984	Client Provided		499		White Paint/Synchronized Red Lights
CRI-63	Lighting Study for Wind Turbine	2018-WTE-12148-OE	45-2-38.84N	96-54-34.64W	1933	1932	Client Provided		499		White Paint/Synchronized Red Lights
CRI-58	Lighting Study for Wind Turbine	2018-WTE-12143-OE	45-2-48.52N	96-53-46.94W	1921	1921	Client Provided		499		White Paint/Synchronized Red Lights
CRI-59	Lighting Study for Wind Turbine	2018-WTE-12144-OE	45-2-47.39N	96-53-7.72W	1882	1879	Client Provided		499		White Paint/Synchronized Red Lights
CRI-71	Lighting Study for Wind Turbine	2018-WTE-12156-OE	45-2-21.84N	96-58-33.96W	1994	1993	Client Provided		499		White Paint/Synchronized Red Lights
CRI-72	Lighting Study for Wind Turbine	2018-WTE-12157-OE	45-2-20.94N	96-58-2.82W	1991	1991	Client Provided		499		White Paint/Synchronized Red Lights
CRI-69	Lighting Study for Wind Turbine	2018-WTE-12154-OE	45-2-25.19N	96-57-38.26W	1988	1987	Client Provided		499		White Paint/Synchronized Red Lights
CRI-73	Lighting Study for Wind Turbine	2018-WTE-12158-OE	45-2-19.55N	96-57-5.44W	2003	2001	Client Provided		499		White Paint/Synchronized Red Lights
CRI-70	Lighting Study for Wind Turbine	2018-WTE-12155-OE	45-2-19.55N	96-56-27.62W	2007	2007	Client Provided		499		White Paint/Synchronized Red Lights

CRI-66	Lighting Study for Wind Turbine	2018-WTE-12151-OE	45-2-28.26N	96-55-41.88W	2015	2012	Client Provided	499	White Paint/Synchronized Red Lights
CRI-77	Lighting Study for Wind Turbine	2018-WTE-12162-OE	45-2-0.08N	96-58-46.01W	2011	2010	Client Provided	499	White Paint/Synchronized Red Lights
CRI-81	Lighting Study for Wind Turbine	2018-WTE-12166-OE	45-1-50.57N	96-58-15.86W	1993	1993	Client Provided	499	White Paint/Synchronized Red Lights
CRI-78	Lighting Study for Wind Turbine	2018-WTE-12163-OE	45-1-56.02N	96-57-30.62W	1982	1981	Client Provided	499	White Paint/Synchronized Red Lights
CRI-80	Lighting Study for Wind Turbine	2018-WTE-12165-OE	45-1-52.93N	96-56-56.85W	1998	1996	Client Provided	499	White Paint/Synchronized Red Lights
CRI-76	Lighting Study for Wind Turbine	2018-WTE-12161-OE	45-1-58.25N	96-56-17.96W	2022	2020	Client Provided	499	White Paint/Synchronized Red Lights
CRI-74	Lighting Study for Wind Turbine	2018-WTE-12159-OE	45-2-0.23N	96-55-48.54W	2020	2019	Client Provided	499	White Paint/Synchronized Red Lights
	Lighting Study for Wind Turbine	2018-WTE-12160-OE	45-1-57.96N	96-54-58.55W	1999	1999	Client Provided	499	White Paint/Synchronized Red Lights
CRI-75									
CRI-86	Lighting Study for Wind Turbine	2018-WTE-12171-OE	45-1-31.99N	96-59-15.53W	2015	2015	Client Provided	499	White Paint/Synchronized Red Lights
CRI-85	Lighting Study for Wind Turbine	2018-WTE-12170-OE	45-1-32.65N	96-58-40.72W	2009	2009	Client Provided	499	White Paint/Synchronized Red Lights
CRI-88	Lighting Study for Wind Turbine	2018-WTE-12173-OE	45-1-22.03N	96-58-1.71W	1978	1977	Client Provided	499	White Paint/Synchronized Red Lights
CRI-84	Lighting Study for Wind Turbine	2018-WTE-12169-OE	45-1-34.18N	96-57-37.51W	1971	1971	Client Provided	499	White Paint/Synchronized Red Lights
CRI-87	Lighting Study for Wind Turbine	2018-WTE-12172-OE	45-1-24.06N	96-56-45.22W	1997	1997	Client Provided	499	White Paint/Synchronized Red Lights
CRI-83	Lighting Study for Wind Turbine	2018-WTE-12168-OE	45-1-40.13N	96-56-26.46W	1993	1993	Client Provided	499	White Paint/Synchronized Red Lights
CRI-82	Lighting Study for Wind Turbine	2018-WTE-12167-OE	45-1-40.26N	96-55-38.76W	2013	2012	Client Provided	499	White Paint/Synchronized Red Lights
CRI-91	Lighting Study for Wind Turbine	2018-WTE-12176-OE	45-1-4.35N	97-0-25.51W	2009	2009	Client Provided	499	White Paint/Synchronized Red Lights
CRI-89	Lighting Study for Wind Turbine	2018-WTE-12174-OE	45-1-5.67N	96-59-51.91W	2018	2017	Client Provided	499	White Paint/Synchronized Red Lights
CRI-90	Lighting Study for Wind Turbine	2018-WTE-12175-OE	45-1-3.55N	96-59-16.01W	2010	2009	Client Provided	499	White Paint/Synchronized Red Lights
CRI-93	Lighting Study for Wind Turbine	2018-WTE-12178-OE	45-0-57.21N	96-58-49.37W	1994	1992	Client Provided	499	White Paint/Synchronized Red Lights
	Lighting Study for Wind Turbine	2018-WTE-12177-OE	45-0-59.85N	96-58-7.89W	1992	1992	Client Provided	499	White Paint/Synchronized Red Lights
CRI-92									
CRI-94	Lighting Study for Wind Turbine	2018-WTE-12179-OE	45-0-54.63N	96-57-37.12W	1972	1971	Client Provided	499	White Paint/Synchronized Red Lights
CRI-Alt22	Lighting Study for Wind Turbine	2019-WTE-6862-OE	45-1-1.02N	96-56-16.12W	2012	2007	Client Provided	499	White Paint/Synchronized Red Lights
CRI-97	Lighting Study for Wind Turbine	2018-WTE-12182-OE	45-0-27.89N	97-1-18.13W	1946	1945	Client Provided	499	White Paint/Synchronized Red Lights
CRI-96	Lighting Study for Wind Turbine	2018-WTE-12181-OE	45-0-37.65N	97-0-39.21W	1997	1997	Client Provided	499	White Paint/Synchronized Red Lights
CRI-95	Lighting Study for Wind Turbine	2018-WTE-12180-OE	45-0-41.82N	97-0-5.07W	2009	2009	Client Provided	499	White Paint/Synchronized Red Lights
CRI-98	Lighting Study for Wind Turbine	2018-WTE-12183-OE	45-0-10.07N	97-0-27.77W	1997	1997	Client Provided	499	White Paint/Synchronized Red Lights
CRI-100	Lighting Study for Wind Turbine	2018-WTE-12185-OE	45-2-45.23N	96-51-19.77W	1915	1918	Client Provided	499	White Paint/Synchronized Red Lights
CRI-99	Lighting Study for Wind Turbine	2018-WTE-12184-OE	45-2-38.88N	96-48-33.82W	1825	1824	Client Provided	499	White Paint/Synchronized Red Lights
CRI-101	Lighting Study for Wind Turbine	2018-WTE-12186-OE	45-2-49.07N	96-48-15.13W	1788	1790	Client Provided	499	White Paint/Synchronized Red Lights
CRI-102	Lighting Study for Wind Turbine	2018-WTE-12187-OE	45-3-9.79N	96-51-56.66W	1902	1906	Client Provided	499	White Paint/Synchronized Red Lights
CRI-103	Lighting Study for Wind Turbine	2018-WTE-12188-OE	45-3-11.73N	96-51-0.77W	1898	1906	Client Provided	499	White Paint/Synchronized Red Lights
CRI-105	Lighting Study for Wind Turbine	2018-WTE-12190-OE	45-3-9.91N	96-50-5.56W	1870	1875	Client Provided	499	White Paint/Synchronized Red Lights
CRI-106	Lighting Study for Wind Turbine	2018-WTE-12191-OE	45-3-17.13N	96-49-29.17W	1852	1859	Client Provided	499	White Paint/Synchronized Red Lights
	Lighting Study for Wind Turbine	2018-WTE-12189-OE	45-3-10.53N	96-48-55.98W	1818	1822	Client Provided	499	White Paint/Synchronized Red Lights
CRI-104		2018-WTE-12183-OE	45-3-29.94N	96-48-13.74W	1777	1778	Client Provided	499	
CRI-108	Lighting Study for Wind Turbine								White Paint/Synchronized Red Lights
CRI-107	Lighting Study for Wind Turbine	2018-WTE-12192-OE	45-3-35.24N	96-52-11.04W	1903	1908	Client Provided	499	White Paint/Synchronized Red Lights
CRI-Alt2	Lighting Study for Wind Turbine	2018-WTE-12220-OE	45-4-9.56N	96-50-59.94W	1844	1846	Client Provided	499	White Paint/Synchronized Red Lights
CRI-109	Lighting Study for Wind Turbine	2018-WTE-12194-OE	45-3-58.93N	96-49-44.96W	1829	1831	Client Provided	499	White Paint/Synchronized Red Lights
CRI-112	Lighting Study for Wind Turbine	2018-WTE-12196-OE	45-4-33.33N	96-50-5.58W	1844	1844	Client Provided	499	White Paint/Synchronized Red Lights
CRI-111	Lighting Study for Wind Turbine	2018-WTE-12195-OE	45-4-28.14N	96-49-29.14W	1803	1807	Client Provided	499	White Paint/Synchronized Red Lights
CRI-114	Lighting Study for Wind Turbine	2018-WTE-12198-OE	45-4-53.41N	96-50-55.17W	1843	1842	Client Provided	499	White Paint/Synchronized Red Lights
CRI-117	Lighting Study for Wind Turbine	2018-WTE-12201-OE	45-5-15.09N	96-50-46.58W	1786	1790	Client Provided	499	White Paint/Synchronized Red Lights
CRI-118	Lighting Study for Wind Turbine	2018-WTE-12202-OE	45-5-21.29N	96-50-24.71W	1774	1774	Client Provided	499	White Paint/Synchronized Red Lights
CRI-120	Lighting Study for Wind Turbine	2018-WTE-12204-OE	45-5-21.82N	96-49-35.55W	1752	1761	Client Provided	499	White Paint/Synchronized Red Lights
CRI-116	Lighting Study for Wind Turbine	2018-WTE-12200-OE	45-5-00.17N	96-49-8.61W	1744	1744	Client Provided	499	White Paint/Synchronized Red Lights
CRI-68	Lighting Study for Wind Turbine	2018-WTE-12153-OE	45-2-21.45N	96-53-59.04W	1926	1920	Client Provided	499	White Paint/Synchronized Red Lights
CRI-67	Lighting Study for Wind Turbine	2018-WTE-12152-OE	45-2-23.04N	96-53-22.14W	1888	1883	Client Provided	499	White Paint/Synchronized Red Lights
CNI-07	Lighting Study for Willia Turbille	2010-WIL-12132-OL	45-2-25.0411	JU-JJ-ZZ.14VV	1000	1003	Cheffe Frovided	433	with anity synchronized ned lights

CRI-42	Lighting Study for Wind Turbine	2018-WTE-12127-OE	45-4-15.42N	96-58-18.93W	1926	1926	Client Provided	499	White Paint/Synchronized Red Lights
East Radar	Met Tower		45-02-38.47N	96-48-20.56W	1806	1802	Client Provided	78	None
West Radar	Met Tower		45-04-39.94N	97-00-05.08W	2005	2002	Client Provided	48	None
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